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09/822,500	04/02/2001	Boaz Nitzan	1328	7527

7590

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EXAMINER

WEBB, GREGORY E

ART UNIT

PAPER NUMBER

1751

DATE MAILED: 05/20/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

53

# Office Action Summary

Applicati n N .

09/822,500

Applicant(s)

NITZAN ET AL.

Examiner

Gregory E. Webb

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-- The MAILING DATE of this communication appears on the cover sheet with th corresp ndence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disp sition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 6-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Pri rity under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION*****Response to Amendment***

The applicant has amended claim 6 to recite a composition using the transitional phrase "consisting of." The examiner appreciates the amendment as this more clearly defines the applicant's invention. However, the examiner is concerned that these claims no longer allow for the inclusion of water. It is suggested that the applicant amend the claim to describe an "aqueous pre-treatment liquid." Such amendments would allow for any amount of water to be added to the composition. Based on the applicant's specification, the examiner will review these claims assuming that water is a possible constituent of the liquid. Alternatively, if the applicant does wish to exclude water in their compositions, it is suggested that the applicant avoid the language found in claim 8 that further describes the role of water in these compositions. Also, it should be noted, that the removal of water from the prior art solution would have been an obvious variation of the prior art as the prior art solutions can be manufactured as a concentrate without water so as to reduce the cost of shipping.

***Claim Rejections - 35 USC § 112***

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "said polyvalent metallic salt." There is insufficient antecedent basis for this limitation in the claim. It is suggested that the applicant refer to this aspect as recited in claim 6 as an "ion donor."

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Previous rejections of claims 6, 7, 9-18, 22, and 23 under 35 U.S.C. 102(b) as being anticipated by Kukharskay et al (SU 1058453A) are withdrawn based on the applicant's amendments. The claims now require the composition to only contain the ion donor and swelling agent. As the prior art requires additional components, this reference fails to anticipate the claimed composition.
2. Previous rejections of claims 6, 7, 9-12, 19, 20, 22, and 23 under 35 U.S.C. 102(b) as being anticipated by Figov et al (GB 1,492,529) are withdrawn.
3. Figov requires the inclusion of diethylene glycol in their composition. The claims now require the composition to only contain the ion donor and swelling agent. As the prior art requires additional components, this reference fails to anticipate the claimed composition.
4. Previous rejections of claims 6-24 under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al (US 5,064,749) are withdrawn.
5. The claims now require the composition to only contain the ion donor and swelling agent. As the prior art requires additional components, this reference fails to anticipate the claimed composition.
6. Previous rejections of claims 6-12, and 22-24 under 35 U.S.C. 102(b) as being anticipated by Gautier et al (US 4,540,448) are withdrawn.

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7. Gautier requires additional components excluded by the instant claims. Specifically, Gautier requires the addition of hydrocarbons.
8. Previous rejections of claims 6, 7, 9-12, and 22-24 under 35 U.S.C. 102(b) as being anticipated by Herdt et al (US 6,121,219) are withdrawn.
9. Herndt requires additional components now excluded by the instant claims. Specifically, Herndt requires the addition of surfactants.
10. Previous rejections to claims 6, 7, 9-12, 19, and 22 under 35 U.S.C. 102(b) as being anticipated by Beggs et al (US 6,017,968) are withdrawn.
11. Beggs requires additional components now excluded by the instant claims. Specifically, Beggs requires the addition of aluminum oxide.
12. Claims 6, 7, and 9-12, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Burns et al (US 4,560,410).
13. Burns teaches the following fountain solution:

"This invention is directed to an improved fountain solution suitable for use in a lithographic offset printing press, which solution contains a mixture of a polyol and/or glycol ether partially soluble in water and a polyol and/or glycol ether completely soluble in water." (see col. 1)

Burns teaches the use of aqueous solvents including the following glycol ethers:

"The mixture of polyols and/or glycol ethers which is suitable for use in this invention include a polyol and/or glycol which is partially soluble in water, such as 2-ethyl-1,3-hexanediol, Esterdiol-204, i.e., HOCH.sub.2 C(CH.sub.3).sub.2 CH.sub.2 OCOC(CH.sub.3).sub.2 CH.sub.2 OH, Hexyl Cellosolve, i.e., C.sub.6 H.sub.13 OCH.sub.2 CH.sub.2 OH, Hexyl Carbitol, i.e., C.sub.6 H.sub.13 O(C.sub.2 H.sub.4 O).sub.2 H, and the like. The polyol and/or glycol ethers which is completely soluble in water includes, for example, propylene glycol, ethylene glycol, dipropylene glycol, diethylene glycol, hexylene glycol, triethylene glycol, tetraethylene glycol, tripropylene glycol, 1,5-pentanediol, methyl cellosolve, i.e., CH.sub.3 OC.sub.2 H.sub.4 OH, cellosolve solvent, i.e., C.sub.2 H.sub.5 OC.sub.2 H.sub.4 OH, butyl cellosolve solvent, i.e., C.sub.4 H.sub.9 OC.sub.2 H.sub.4 OH, and the like.

From about 0.08 to about 10 parts by volume of the polyol and/or glycol ether, which is partially soluble in water, is used per part by volume of the

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polyol and/or glycol ether which is completely soluble in water. " (see col. 2)

Burns teaches the use of phosphoric acid as the ion donor:

The fountain solutions are preferably used as aqueous acidic solutions. Phosphoric acid is a preferred acid for use in acidifying the formulation. Other acids which can be used include inorganic as well as organic acids, such as acetic acid, nitric acid, hydrochloric acid, and the like. A buffering agent, such as ammonium acetate can also be included.

Burns teaches the pH of the solution as follows:

The fountain solution is generally maintained at a pH of from about 2 to about 5. However, the particular pH at which a given solution will be maintained will depend upon factors, such as the type of water-soluble polymer used, other ingredients in the solution as well as the type of substrate employed in the lithographic printing plate, and the like.

14. Claims 6-11, 19, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by

Lawson et al (US 4,247,328).

15. Lawson teaches fountain solutions containing the following:

When only a few copies are required it can be adequate to moisten the non-image areas with tap water or distilled water. When several thousand copies are required it is necessary to use an aqueous fountain (or dampening or fount) solution to ensure and maintain maximum water receptiveness and hence maximum ink repellancy of the non-image areas. This necessitates including in the fountain solution small quantities of materials known to lithographically desensitize the lithographic plate e.g. phosphoric, citric or tartaric acids or their salts. Fountain solutions may be acidic or alkaline and usually have a pH in the range 4 to 10.

16. Lawson teaches about the solution's liquid vehicle as follows:

Preferably the liquid vehicle is a homogeneous liquid and it is preferred for the organic solvent to be an alcohol. A particularly preferred alcohol is isopropyl alcohol optionally in admixture with other alcohols such as isobutyl alcohol or 2-ethoxyethanol. Specific examples of liquid vehicles suitable for use with triethylammonium phosphate as desensitising material are ethylene glycol; propylene glycol; glycerol; hexylene glycol; a mixture of 85 parts by volume N-methyl-2-pyrrolidone and 15 parts by volume water; a mixture of 75 parts by volume 2-methoxy ethyl acetate and 25 parts by volume water; 2-(2-ethoxyethoxy ethanol); 1,3-butane diol; and 2-(2-butoxyethoxy)-ethanol. Examples of liquid vehicles suitable for use with butyl acid phosphate as desensitising material are 2-(2-butoxyethoxy)-ethanol; polyethylene glycol; a mixture of equal parts by volume of water and glycerol; 2-(2-ethoxy ethoxy)-ethanol and propylene glycol. Examples of liquid vehicles suitable for

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use with citric acid as desensitising material are 2-ethoxy ethanol and 2-(2-methoxyethoxy)-ethanol. Examples of liquid vehicles suitable for use with phosphoric acid as desensitising material are 2-methoxy methyl acetate; gamma-butyrolactone; and N-methyl-2-pyrrolidone.

17. Lawson teaches the desensitising component (i.e. ion donor) to be:

The lithographic desensitising material may be an acid, such as phosphoric acid, citric acid, tartaric acid or ethylene diamine tetraacetic acid or salts or other derivatives of such acids. It is particularly preferred to use an organo substituted-ammonium salt of such an acid as lithographic desensitising material. The use of salts as desensitising material is preferred since they act as a buffer and overcome the effects of the use of acid or alkaline tap-waters. Preferred salts are triethylammonium phosphate, triethylammonium dihydrogen phosphate, tripropyl ammonium dihydrogen phosphate, dimethylammonium dihydrogen phosphate, butyl acid phosphate and trisodium citrate. Mixtures of acids, mixtures of salts and acid/salt mixtures may be used as the lithographic desensitising material.

18. Lawson teaches the use of the phosphoric acid in amounts ranging from approximately 0.2-20% of the composition (see claim 7). Lawson teaches the amount of solvent to be between 50-100% of the composition and 0-50% water.

19. Claims 6-21, 23, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Jolliffe et al (US 6,182,571).

20. Jolliffe describes a three step planographic printing process. The second step of this process is for modifying the hydrophilic layer using a "modifying means." Jolliffe describes in detail the composition used for this step. Noting that such compositions contain 1) a ion donor including acids and multivalent metal salts; 2) solvents for deleting parts of the image including NMP, ketones; 3) and the pH of the solution. See the following section from columns 1 and 2 of Jolliffe (note in particular underlined sections):

A suitable modifying means can be selected by comparing the effect of a proposed modifying means on said indicator means when said proposed modifying means has been applied, with the effect (if any) when said proposed modifying means has not been applied. When no modifying means is applied, the indicator means may be incapable of indicating between said first and second states of said image layer.

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(24) Preferably, said modifying means is arranged to lower the pH of at least the outermost surface of the hydrophilic layer, so that its pH after application of said modifying means is less than its pH before application. Preferably, the pH (before application) of the fluid used in step (a) is greater than the pH (before application) of the modifying means used in step (b). The pH of the fluid may be greater than 9.0, preferably greater than 9.5 and, more preferably, greater than 10.0. The pH of the modifying means may be less than 10.0, preferably less than 9.0, more preferably less than 8.0. Especially preferred is the case wherein the pH is about 7 or below. In the most preferred embodiments, the pH is less than 5.0. The pH may be above 1, preferably above 2 and more preferably above 3.

(26) Said deletion means preferably includes a solvent, suitably an organic solvent, with N-methylpyrrolidone and cyclohexanone being especially preferred; an etchant material which may be acidic or alkaline but is preferably acidic, and is suitably selected from phosphoric acid, hydrogen fluoride and ammonium bifluoride; and other minor components, for example surface active agents, thickeners and the like.

(27) Preferably, said modifying means includes water as a solvent. Preferably, said modifying means comprises an aqueous solution or dispersion. Preferably, said modifying means includes one or more components selected from acids, buffer formulations, colloidal suspensions and salts.

(28) Preferred acids are protic acids and include phosphoric acid, sulphuric acid, hydrochloric acid, nitric acid, acetic acid, citric acid, sodium hydrogen carbonate and boric acid, with boric acid being especially preferred.

(29) Preferred buffer formulations include formulations including citric acid and/or a monohydrogen phosphate and/or a dihydrogen phosphate and/or boric acid in combination with, for example a strong acid and/or an alkali. Especially preferred buffer formulations include a phosphate.

(30) Preferred colloidal suspensions include insoluble oxides and/or hydroxides, preferably of Group III or IV elements, with silica and aluminum hydroxide being especially preferred.

(31) Cations of salts may be selected from group I, II and III, metals and transition metals, especially, first row transition metals. Preferred salts have cations selected from sodium, potassium, magnesium, calcium, aluminum, titanium, manganese, iron, copper and zinc.

(32) Anions of salts may be selected from sulphate, monohydrogenphosphate, dihydrogen phosphate, orthophosphate, polyvinylphosphonate, acetate, citrate, aluminate, chloride, propionate and nitrate.

(33) Preferred salts include aluminum sulphate, sodium dihydrogen phosphate, sodium sulphate, sodium citrate, calcium monohydrogenphosphate, aluminum nitrate, aluminum chloride, titanium III sulphate, iron III nitrate, iron III sulphate, iron II sulphate, iron III phosphate, copper II sulphate, copper nitrate, zinc II sulphate, zinc phosphate and manganese phosphate.

(34) Especially preferred salts include aluminum sulphate, aluminum nitrate,



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iron III nitrate, iron III sulphate, iron II sulphate, copper II sulphate, copper nitrate and zinc II sulphate.

(35) The most preferred salt is aluminum sulphate.

(36) Where said modifying means comprises a solution or dispersion, the concentration of the solute or dispersant may be at least 2 wt %, suitably at least 3 wt %, preferably at least 4 wt % and more preferably, at least 5 wt %. The concentration of the solute or dispersant may be less than 50 wt %, preferably less than 40 wt % and, more preferably, less than 30 wt %.

### *Response to Argument/Conclusions*

21. The examiner has withdrawn all previous rejections based on the applicant's amendments to the claims (see above). The applicant's amendment has excluded additional components required by these prior art compositions.

22. The applicant's claims are directed to a multiplicity of combination of the three components in their composition. Similarly the prior art is also replete with various combinations of these same components. It is therefore suggested that the applicant more specifically define each of these components by choosing more preferred embodiments of each component and possibly the pH. Such specific combinations of components and pH would most likely not be either anticipated or rendered obvious by the prior art of record as the prior art teach many thousands of combinations of these three components.

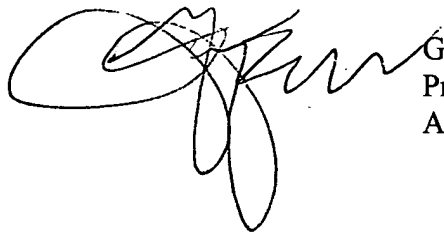
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 703-305-4945. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

A handwritten signature in black ink, appearing to read 'Gregory E. Webb', with a large, stylized loop at the end.

Gregory E. Webb  
Primary Examiner  
Art Unit 1751

gw  
May 16, 2003